

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Martin F. Berry et al.

Art Unit : 1761

Serial No. : 09/447,023

Examiner : Helen Pratt

Filed : November 22, 1999

Title : CRANBERRY PROCESSES AND PRODUCTS

RECEIVED
SEP 11 2003
TC 1700

MAIL STOP AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

BRIEF ON APPEAL

Appellants are appealing the rejection of claims 70, 85, 86, 88-97 and 99-109 in an Office Action mailed on June 12, 2003. The claims have been twice rejected. A Notice of Appeal is being filed concurrently with this Brief. Appellants request that the rejection of these claims be reversed.

(1) Real Party in Interest

The real party in interest is Ocean Spray Cranberries, Inc., One Ocean Spray Drive, Lakeville-Middleboro, MA 02349.

(2) Related Appeals and Interferences

There are no related appeals or interferences.

(3) Status of Claims

Claims 70, 85, 86, 88-97 and 99-109 are pending. All the claims have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, and under 35 U.S.C. § 103(a) as being unpatentable over Chiriboga et al., Journal of Food Science, pp. 464-467 ("Chiriboga").

(4) Status of Amendments

All amendments have been entered.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Deposit

9/5/03

Signature

Cassandra Beepot

Typed or Printed Name of Person Signing Certificate

Cassandra Beepot

(5) Summary of Invention

The color of cranberries characteristically changes as cranberries mature during cultivation, going from a green color, to a white or pale yellow color, and finally to the familiar deep red color usually associated with cranberries. In effect, as cranberries characteristically mature, the red pigment content of the fruit changes; this change can be quantified by measuring the relative anthocyanin levels in the fruit or in the resulting juice.

As discussed in the specification of Appellants' patent application, the prior ordinary and commercially desirable color of cranberries, i.e. the deep red hue characteristic of cranberries, is substantially due to the presence of anthocyanin in the berries. Prior to the inventions described in our patent application, it was convention in the industry to segregate lots of cranberries by color. Very low color berries, those being generally from pink to white in appearance, were typically relatively small in number and were considered undesirable.

The Ocean Spray protocol for color grading lots of berries that was in use prior to our inventions had six color grades. The lowest color grade was grade 1, which was for lots having a berry anthocyanin content of about 24 mg/100 g or less. The other color grades corresponded to higher anthocyanin content. For example, grade 2 corresponded to 25 to 29 mg/100 g and grade 6 corresponded to 60 to 69 mg/100 g or more. (The berry anthocyanin content is usually about twice the juice anthocyanin content. Note that even for color grade 1, the low juice anthocyanin level of the juice component in our claims would not necessarily be provided.) The commercial value of the fruit, and the compensation to Ocean Spray's growers, was based in part on the color grade, with the more highly colored berries having greater value and the grower generally receiving greater payment.

For Ocean Spray cranberry juice cocktail (CJC), lots of different color grade, or juice derived from lots having different color grade, were typically blended to assure that the finished product conformed to a specified red color standard. The target red color for Ocean Spray CJC typically corresponded to a berry anthocyanin content of about 30 to 50 mg/100 g or more. The anthocyanin content of the corresponding juice ingredient derived from the berries is typically about 15 to 25 mg/100 ml. However, the anthocyanin content of the finished CJC product in

which the juice component is diluted with water and other ingredients is typically about 4-7 mg/100 ml.

The invention relates to a blended juice that includes a cranberry juice component having an anthocyanin level of about 10 mg/100 ml or less as the sole component from cranberries in the blend.

Two independent claims (claims 70 and 97) are pending. Claim 70 is directed to a food product including a cranberry juice component with a low anthocyanin content. This component is the sole component from cranberries in the food product:

70. A cranberry food product comprising a blended juice, including:
a cranberry juice component that has a juice anthocyanin content of about 10 mg/100ml or less and
a component selected from another juice component, water, sweetener or acid,
wherein the juice component derived from cranberries having said anthocyanin content is the sole component from cranberries in the blend.

Claim 97 is directed to a food product including a cranberry juice component with a low anthocyanin content, a non-cranberry juice component, and a sweetener:

97. A cranberry food product comprising a blended juice, including:
a cranberry juice component that has a juice anthocyanin content of about 10 mg/100 ml or less,
another juice component, and
a sweetener,
wherein the juice component derived from cranberries having said anthocyanin content is the sole component from cranberries in the blend.

One technique for obtaining this juice component is to cultivate berries so that many do not obtain a deep red color, and then color-select the very low color berries, which are typically white or pink, to substantially isolate berries with low anthocyanin content (see specification page 2, lines 17-18 and page 5, lines 10- page 6, line 10).

Because the light color cranberries have a high-value use, harvesting may be timed to optimize the yield of light color cranberries, rather than full red cranberries, in at least some bogs. When only deep red cranberries are desired, growers tend to leave the berries in their bogs as long as possible before harvesting them. This practice allows most of the berries to reach a deep red color, but runs the risk of losing some of the crop to a fruit-damaging frost. Harvesting

light as well as dark cranberries allows the grower to extend the length of the harvest, which is generally eight weeks or less when only deep red cranberries are harvested. The extended harvest time reduces the risk of crop loss due to frost.

Since the discovery of Appellants' inventions, Ocean Spray has marketed blended juice products in which a cranberry juice component having a juice anthocyanin content of about 10 mg/100 ml or less is the sole cranberry component in the blend. An example is the "White Cranberry" juice product; a story board for a television commercial for this product is attached as Exhibit A. As shown in the photographs, the juice from light colored cranberries has a light color. This juice was named one of the "Best New Products of 2002" by Stagnito's New Products Magazine, as shown in Exhibit B.

(6) Issue

Are claims 70, 85, 86, 88-97 and 99-109 unpatentable under 35 U.S.C. § 103(a) over Chiriboga?

Do claims 70, 85, 86, 88-97 and 99-109 fail to comply with the written description requirement under 35 U.S.C. § 112, first paragraph?

(7) Grouping of Claims

The pending claims do not stand or fall together.

(8) Argument

Rejection Under 35 U.S.C. § 103(a)

The 35 U.S.C. § 103(a) rejection is based on Chiriboga.

The objective in Chiriboga is to meet a red color standard for CJC by mixing juice from lower grade, somewhat off color "pale" berries with juice from high color grade berries and then make up for any color deficiency by adding anthocyanin extract:

A PORTION of the annual crop of cranberries tends to be pale in color, producing a light colored cocktail which is not as appealing as full colored cocktail. In the past, pale berries were used for production of cranberry sauce and other products where color was not critical. As cranberry cocktail captures a larger share of the market for cranberry products, it may become necessary to utilize some of these light berries for cocktail. If it be necessary to add pigment to pale cranberry cocktail, the most acceptable material to use would be a natural pigment extracted from cranberries since in this case nothing is being added to the product which was not present originally... The primary objective of this work

was to study some properties of an anthocyanin pigment preparation derived from cranberries, and its effect on shelf life when added to cranberry cocktail.
(Chiriboga, p. 464, right column)

As discussed in Appellants' specification, it was, of course, known to mix lower color grade berries with higher color grade berries to meet a red color standard (see specification pages 1-2). The objective, as set forth as well in Chiriboga et al., has been to achieve the natural, deep red color associated with cranberries. As a result, the mixing of low color grade berry lots is guided by the motivation to provide a juice that is still characteristically red. This clearly teaches away from Appellants' inventions directed to a blended juice including a juice component derived from cranberries having an anthocyanin content of about 10 mg/100 ml or less as the sole component in the blend, and the advantage of embodiments, which is the lack of the characteristic deep red color associated with cranberries.

The rejection points in particular to Table 1 and indicates that Chiriboga discloses a juice component that contains anthocyanin content within the claimed range. This analysis of Table 1 is incorrect. Table 1 provides the anthocyanin content of experimental batches of CJC, not the anthocyanin content of the juice component(s) as an ingredient(s). The experimental CJCs in Table 1 were formulated by blending press juices from "dark" and relatively "pale" cranberries, and by adding crude anthocyanin powder (except for the first example in which no powder is added). While Chiriboga uses the terms "light" and "pale," the anthocyanin content of the "light" press juice is not reported. Nor can the anthocyanin content of the "light" press juice be reliably calculated from the data provided by Chiriboga.

Attached as Exhibit C is a Declaration of Harold Mantius that was submitted to the Examiner on September 30, 2002. As the declaration explains, Table 1 of Chiriboga lists the anthocyanin contents of batches of blended cranberry juice cocktail, both before additional anthocyanin was added, and after the addition of anthocyanin. Each of these batches consisted of 36% press juices (a combination of "dark" and "pale" juices), and 64% sugar water. Although the anthocyanin content of the final solution, i.e., the combination of press juices and sugar water, is reported, the anthocyanin content of the "dark" and "light" press juices themselves is not reported. Appellants were able to calculate the anthocyanin content of a "dark" press juice (38.33 mg/100 ml) but were unable to reliably calculate the anthocyanin content of

any of the "light" press juices because Chiriboga does not disclose enough data to do so. Thus, Appellants submit that Chiriboga does not describe a cranberry juice component having a juice anthocyanin content of about 10 mg/100 ml or less, either explicitly or inherently.

Clearly, Chiriboga does not describe a product containing only "light" juices. Instead, Chiriboga discloses cranberry juice cocktail made from a combination of "light" and "dark" juices, and cranberry juice cocktail made only from "dark" juice. Appellants' claims, on the other hand, are directed to a blended juice product having as the sole component from cranberries a juice component with an anthocyanin content of about 10 mg/ml or less. Chiriboga thus does not disclose Appellants' invention.

Moreover, Chiriboga does not suggest that making a light colored juice from cranberries, which are traditionally dark red, is desirable. Chiriboga, in fact, is directed to just the opposite – Chiriboga teaches how to make deeply red colored cranberry juice. The focus of Chiriboga is on extracting anthocyanin pigments from cranberries so that this pigment can be added to cranberry juice cocktail, thereby increasing the final anthocyanin content to reach an acceptable minimum level.

It is well established that for a rejection under 35 U.S.C. § 103, it is the Examiner who has the initial burden of making a prima facie case:

(1) "In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. . . . 'A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned.' " In re Rijckaert, 9 F.3d 1531, 1532 (Fed. Cir. 1993)

This burden can only be discharged by providing evidence of motivation to combine or modify the teaching of the prior art references, which evidence typically comes from the references themselves:

We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, . . . although "the suggestion more often comes from the teachings of the pertinent references," . . . The range of sources available,

however, does not diminish the requirement for actual evidence. In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999) (citations omitted)

This evidence must be clear and particular, not broad, conclusory, or speculative:

That is, the showing must be clear and particular. *See, e.g., C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." *E.g., McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact."); *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977) ("The examiner's conclusory statement that the specification does not teach the best mode of using the invention is unaccompanied by evidence or reasoning and is entirely inadequate to support the rejection.") Id. (citations omitted)

For example, in In re Rijckaert, 9 F.3d 1531, 1532 (Fed. Cir. 1993), the Federal Circuit reversed a rejection based on the assertion that a claimed relationship was "probably satisfied" by the prior art. In In re Deminski, 796 F.2d 436 (Fed. Cir. 1986), the invention related to a valve assembly that could be removed as a unit. The court found insufficient as evidence of motivation that a prior art reference would provide such an assembly if arranged according to "common practice":

There was no suggestion in the prior art to provide Deminski with the motivation to design the valve assembly so that it would be removable as a unit. The board argues that if Pocock had followed the "common practice" of attaching the valve stem to the valve structure, then the valve assembly would be removable as a unit. The only way the board could have arrived at its conclusion was through hindsight analysis by reading into the art Deminski's own teachings. Hindsight analysis is clearly improper, since the statutory test is whether "the subject matter as a whole would have been obvious at the time the invention was made." Id. at 443

As the court indicates above, strict adherence to the requirement for a showing of motivation prevents improper hindsight analysis in which the teaching in Appellants' own specification is used as a blueprint for applying the prior art. See also In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1994) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.")

In this case, the rejection clearly fails to provide any particular evidence in the prior art of a motivation to make Appellants' claimed combinations. According to the rejection, the motivation for modifying the teachings of Chiriboga comes solely from the observation that it is common to make juice from fruit in its natural state (emphasis ours):

The obviousness statement is now changed to -- It would have been obvious to make a colorless juice as disclosed by Chiriboga et al. because Chiriboga et al discloses that pale juices are known and shows an anthocyanin content of less than 10% (Table I) and it is known in general to make juices from various fruits which retain their natural characteristics. (Examiner's action mailed June 12, 2003, p. 2-3.)

In essence, this rejection reasons that, because it is common to make juice from various fruits in a natural state in general, any juice or food product containing juice from any fruit in any natural state would have been obvious. Such a conclusory analysis is clearly inadequate to support an obviousness rejection of Appellants' claims which relate to a specific food product, a blended juice, that includes a juice component from a specific fruit, the cranberry, that is in a specific state, i.e. an anthocyanin level of about 10 mg/100 ml or less, and in specific formulations, as claimed.

And, consistent with the warnings by the Federal Circuit, the conclusory analysis of the rejection in this case has led the examiner into the hindsight trap. For example, the rejection asserts that a light color cranberry juice as the sole component of a blended juice product would have been desirable (emphasis ours):

The use of fruit juice is known, by itself or in blends, it would have been obvious to use only the light juice by itself, if one wanted pale juice. The fact that the cranberry juice is pale is a characteristic of the particular fruit, which is true of the other juices, i.e. they maintain their natural color. Applicants do not claim to have discovered light colored cranberries, and are therefore using known berries to make juice, which is a known process. Id. at 3.

But there is no suggestion in the cited reference that one would "want" a food product as recited in Appellants' claims. To the contrary, Chiriboga reflects that "pale" juice is undesirable because it lacks the deep red color valued in cranberries. The only indication of the desirability of a light color cranberry juice component as the sole cranberry component of a blended juice product is in Appellants' own specification.

Finally, the rejection fails to address the Mantius declaration, which illustrates that the anthocyanin content of the "light" press juices in Chiriboga cannot reliably be calculated. The rejection simply contradicts it.

As a result, Appellants submit that the Examiner has not met her burden of establishing a *prima facie* case of obviousness. Accordingly, the rejection under 35 U.S.C. § 103(a) should be reversed.

Rejection Under 35 U.S.C. § 112, first paragraph

The rejection under the 35 U.S.C. § 112, first paragraph, is as follows:

Claims 70, 85, 86, 88-97, 99-109 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No basis is seen for the phrase "wherein the juice component derived from cranberries having said anthocyanin content is the sole component from cranberries in the blend. There is a basis for the phrase "the blended juice has a citric acid content contributed substantially solely by the cranberries" (page 11, line 3). Id. at 2.

Thus in making their rejection, the examiner appears to require that the specification literally state each limitation in the claim. This reasoning is improper. A case from the USPTO Board of Appeals, Ex Parte Parks 30 USPQ 2d 1234 (1994), is instructive. In Parks, the invention related to a process which involved decomposing a sample to determine nitrogen content. Id. at 1235. The claim recited the decomposition step under certain conditions "in the absence of a catalyst." Id. The Examiner rejected the claim because the specification did not literally state that the decomposition was "in the absence of a catalyst." The Board reversed, making clear that literal support is not a requirement for a written description:

The examiner contends that the rejected claims lack adequate descriptive support because there is "no literal basis for the" claim limitation "in the absence of a catalyst." Clearly, the observation of a lack of literal support does not, in and of itself, establish a *prima facie* case for lack of adequate descriptive support under the first paragraph of 35 USC 112. Id. at 1236 (citations omitted).

The board looked to the disclosure as a whole, including the drawings and text, from the perspective of a person of ordinary skill in the art. Id. Finding that the text and drawings

included a discussion in which no catalyst was used, the Board found the claim adequately supported:

In the situation before us, it cannot be said that the originally-filed disclosure would not have conveyed to one having ordinary skill in the art that appellants had possession of the concept of conducting the decomposition step generating nitric acid in the absence of a catalyst. See, for example, column 5 of the '562 patent, first paragraph, wherein FIG. 4 is discussed. Pyrolysis temperatures of between 600°C and 700°C, and above 700°C were employed to achieve conversion of chemically bound nitrogen to nitric oxide. Smooth conversion was obtained above 700°C, while the optimum conversion was found to occur above 900°C. Throughout the discussion which would seem to cry out for a catalyst if one were used, no mention is made of a catalyst. Id. (footnotes omitted).

Likewise here, the use of low anthocyanin cranberry juice as the sole cranberry component (or in the absence of other cranberry components) is conveyed throughout Appellants' specification. For example, the specification clearly explains Appellants' advances with regard to utilizing low anthocyanin content cranberries, as contrasted with conventional, high color, ripe red cranberries. An aspect of the invention is the use of low anthocyanin berries in food products such as blended juices:

This invention relates to utilizing cranberries at certain phases of development, preferably color development, which are conducive to producing flavorful, low-color, high-value products, such as juices and blended juice drinks. . . . As a result, the juice from these berries can be used to prepare pleasant-tasting, low color-cranberry products, with reduced aftertaste, and with less need to add citric acid or citric acid-containing juices, such as lemon juice, to modify flavor. The berries at the select phase of development typically have a light color, from pink to white, which can be quantified based on the anthocyanin level in the fruit or the resulting juice. (See Appellants' specification, page 2, lines 7-18.)

* * *

In step 26, the selected cranberries are formulated into a food product, such as a pure cranberry juice, a pure blended juice, including cranberry and other juices, or a blended juice product with less than 100% juice by, for example, dilution with water, addition of sweetener, addition of acid, or addition of other juices... The extracted juice or food product from the selected cranberries can be flavored with other fruits or ingredients to produce a fruit juice or food product. The light color and pleasant flavor of the light color cranberries or the extracted juice from the selected cranberries facilitates the

formulation of cranberry products with mild flavor and colors other than red.
(Id. page 7, lines 23-26; and lines 33-35.)

As evident the description in the specification above indicates that an advantage of utilizing the low anthocyanin cranberry juice in food products such as blended juices is that the food products have low color or can be colored other than red. This advantage, of course, is facilitated by using only low anthocyanin cranberry juice in the blend.

The specification illustrates this advantage with a specific example of a blended juice beverage in which the low anthocyanin cranberry juice is the sole component from cranberries in a blend. Table 3 from Appellants' specification, which compares a blended juice using light color cranberry juice, Formula A, with other formulations, is reproduced below:

Table 3 - Beverage Formulas

Ingredient	Formula (%w/w)			
	Formula A	Formula B	Formula C	Formula D
Light Color Cranberry Juice	16.0	-	-	-
Red Cranberry Juice	-	16.0	16.0	25.3
Citric Acid	-	0.15	-	-
Lemon Juice	-	-	3.3	-
Sugar	12.0	12.0	12.0	11.6
Water	to 100	to 100	to 100	to 100

As evident, Formula A has light color cranberry juice as the sole source of cranberries in the blend. As the specification explains, Formula A provides a beverage having characteristics indicated as "clean, citrus tartness with a very mild cranberry flavor, and very pale pink color." (Id. page 10, line 14 to page 12, line 8.)

Thus, Appellants' submit that the specification clearly conveys the invention as claimed. The rejection is inconsistent with the expressly stated advantages of the invention and the specific working example described by the specification. As a result, the rejection under 35 U.S.C. § 112, first paragraph, should be reversed.

(9) Dependent Claims

Claims 85, 86, and 88-96 depend directly or indirectly from claim 70 and are patentable for at least the same reasons. These claims are additionally patentable for other reasons, some of which are detailed below.

Claim 85 recites that the juice component derived from cranberries has a juice anthocyanin content of about 8 mg/100 ml or less; claim 86 recites that the juice component derived from cranberries has a juice anthocyanin content of about 3.5 mg/100 ml or less. Chiriboga does not disclose a blended juice having as the sole component from cranberries a component with a juice anthocyanin content of 8 mg/100 ml or less, and therefore does not render claim 85 unpatentable. Chiriboga does not disclose a blended juice having as the sole component from cranberries a component with a juice anthocyanin content of 3.5 mg/100 ml or less. Thus, Chiriboga does not render claim 86 unpatentable.

Claim 88 recites that the juice component derived from cranberries is about 2 to 35% of the blended juice. Chiriboga does not disclose a blended juice containing 2 to 35 % of a juice component having a juice anthocyanin content of about 10 mg/100 ml or less and therefore does not render claim 88 unpatentable.

Claim 89 recites that the blended juice has an anthocyanin content of about 10 mg/100 ml or less. Chiriboga does not describe a blended juice with an anthocyanin content of about 10 mg/100 ml or less and having as the sole component from cranberries a component with a juice anthocyanin content of about 10 mg/100ml or less. Chiriboga thus does not render claim 89 unpatentable.

Claim 90 recites that the blended juice has an absorbance of 515 nm light of about 0.5 or less. Chiriboga does not describe a blended juice with an absorbance of 515 nm light of 0.5 or less and having as the sole component from cranberries a component with a juice anthocyanin content of about 10 mg/100ml or less, and therefore does not render claim 90 unpatentable.

Claim 91 recites that the food product contains added water. Chiriboga does not teach a food product containing water and having as the sole component from cranberries a component with a juice anthocyanin content of about 10 mg/100ml or less. Chiriboga thus does not render claim 91 unpatentable.

Claim 92 recites that the food product contains another juice component. Chiriboga does not teach a cranberry juice with a non-cranberry juice component added, and therefore does not render claim 92 unpatentable.

Claim 93 recites that the food product contains added sweetener; claim 94 recites that the sweetener is sucrose. Chiriboga does not teach a food product containing the sweetener sucrose and having as the sole component from cranberries a component with a juice anthocyanin content of about 10 mg/100ml or less, and therefore does not render claim 93 or claim 94 unpatentable.

Claim 95 recites that the food product contains added acid; claim 96 recites that the added acid is citric acid or citrus juice. Chiriboga does not teach a food product with added acid, and therefore does not render claim 95 or claim 96 unpatentable.

Claims 99-109 depend directly or indirectly from claim 97 and are patentable for at least the same reasons that claim 97 is patentable. These claims are also patentable for additional reasons, some of which are detailed below.

Claim 99 recites that the sweetener is sucrose. Chiriboga does not describe a product containing sucrose and having as the sole component from cranberries a component with a juice anthocyanin content of about 10mg/100, and therefore does not render claim 97 unpatentable.

Claim 100 recites that the food product contains added acid; claim 101 recites that the added acid is citric acid or citrus juice. Chiriboga does not teach a food product with added acid, and therefore does not render claim 100 or claim 101 unpatentable.

Claim 102 recites that the food product contains added water. Chiriboga does not teach or suggest a food product containing water and having as the sole component from cranberries a component with a juice anthocyanin content of about 10 mg/100ml or less, and therefore does not render claim 102 unpatentable.

Claim 103 recites that the juice component from cranberries is about 2 to 35% of the blended juice. Chiriboga does not disclose a food product containing 2 to 35% of a cranberry juice component that has a juice anthocyanin content of about 10 mg/100 ml or less, and therefore does not render claim 103 unpatentable.

Claim 104 recites that the blended juice has an absorbance of 515 nm light of about 0.5 or less. Chiriboga does not describe a juice with an absorbance of 515 nm light of about 0.5 or less

and having as the sole component from cranberries a component with a juice anthocyanin content of about 10 mg/100ml or less, and therefore does not render claim 104 unpatentable.

Claim 105 recites that the juice component derived from cranberries has an anthocyanin content of about 8 mg/100 ml or less. Chiriboga does not describe a food product in which the sole component from cranberries is a component having an anthocyanin content of about 8 mg/100 ml or less, and therefore does not render claim 105 unpatentable.

Claim 106 recites that the juice component derived from cranberries has an anthocyanin content of about 3.5 mg/100 ml or less. Chiriboga does not describe a food product in which the sole component from cranberries is a component having an anthocyanin content of about 3.5 mg/100 ml or less, and therefore does not render claim 106 unpatentable.

Claim 107 recites that the blended juice has a color determined substantially by the cranberry juice component having a juice anthocyanin content of about 10 mg/100 ml or less. Chiriboga describes blended juices in which the color is determined by "dark" juice and by added anthocyanin, and therefore does not render claim 107 unpatentable.

Claim 108 recites that the blended food product has an anthocyanin content of about 1.6 mg/100 ml or less and a color determined substantially by the cranberry juice component having a juice anthocyanin level of about 10 mg/100 ml or less. Chiriboga does not describe a food product having an anthocyanin content of about 1.6 mg/100 ml or less. Furthermore, Chiriboga does not describe a product in which the color is determined substantially by a cranberry juice component with a juice anthocyanin content of about 10 mg/100 ml or less. Chiriboga thus does not render claim 108 unpatentable.

Claim 109 recites that the anthocyanin content of the blended juice is about 0.5 mg/100 ml or less. Chiriboga does not describe a blended juice having an anthocyanin content of 0.5 mg/100 ml or less and does not render claim 109 unpatentable.

(10) Conclusion

The rejection of claims 70, 85, 86, 88-97 and 99-109 based on 35 U.S.C. § 112, first paragraph, and on 35 U.S.C. § 103(a) based on Chiriboga should be reversed.

A copy of the claims on appeal is included in the attached appendix.

Applicant : Martin F. Berry et al.
Serial No. : 09/447,023
Filed : November 22, 1999
Page : 15

Attorney's Docket No.: 00414-046001

The brief fee of \$320 is enclosed. Please apply any other charges or credits to Deposit
Account No. 06-1050.

Respectfully submitted,

Date: September 5, 2003



John J. Gagel

Reg. No. 33,499

Fish & Richardson P.C.
225 Franklin Street
Boston, Massachusetts 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

20703269.doc

Pending Claims

70. (Previously Presented) A cranberry food product comprising a blended juice, including:
a cranberry juice component that has a juice anthocyanin content of about 10 mg/100ml or less and
a component selected from another juice component, water, sweetener or acid, wherein the juice component derived from cranberries having said anthocyanin content is the sole component from cranberries in the blend.

85. (Previously Presented) The food product of claim 70 wherein the juice component derived from cranberries has a juice anthocyanin content of about 8 mg/100 ml or less.

86. (Previously Presented) The food product of claim 70 wherein the juice component derived from cranberries has a juice anthocyanin content of about 3.5 mg/100 ml or less.

88. (Previously Presented) The food product of any one of claims 70, or 85-86 wherein said juice component derived from cranberries is about 2 to 35% of said blended juice.

89. (Previously Presented) The food product of any one of claims 70, or 85-86 wherein the blended juice has an anthocyanin content of about 10 mg/100 ml or less.

90. (Previously Presented) The food product of any one of claims 70, or 85-86 wherein the blended juice has an absorbance of 515 nm light of about 0.5 or less.

91. (Previously Presented) The food product of any one of claims 70 or 85-86 including added water.

92. (Previously Presented) The food product of any one of claims 70 or 85-86 including another juice component.

93. (Previously Presented) The food product of any one of claims 70, or 85-86 including added sweetener.

94. (Previously Presented) The food product of claim 93 wherein the sweetener is sucrose.

95. (Previously Presented) The food product of any one of claims 70, or 85 - 86 including added acid.

96. (Previously Presented) The food product of claim 95 wherein the added acid is citric acid (or citrus juice).

97. (Previously Presented) A cranberry food product comprising a blended juice, including:
a cranberry juice component that has a juice anthocyanin content of about 10 mg/100 ml or less,
another juice component, and
a sweetener,
wherein the juice component derived from cranberries having said anthocyanin content is the sole component from cranberries in the blend.

99. (Previously Presented) The food product of claim 97 wherein the sweetener is sucrose.

100. (Previously Presented) The food product of claim 97 including added acid.

101. (Previously Presented) The food product of claim 100 wherein the added acid is citric acid (or citrus juice).

102. (Previously Presented) The food product of claim 97 including added water.

103. (Previously Presented) The food product of claim 97 wherein said juice component derived from cranberries is about 2 to 35% of the blended juice.

104. (Previously Presented) The food product of claim 97 wherein the blended juice has an absorbance of 515 nm light of about 0.5 or less.

105. (Previously Presented) The food product of any one of claims 97 or 99-104 wherein the juice component derived from cranberries has an anthocyanin content of about 8 mg/100 ml or less.

106. (Previously Presented) The food product of any one of claims 97 or 99-104 wherein the juice component derived from cranberries has an anthocyanin content of about 3.5 mg/100 ml or less.

107. (Previously Presented) The food product of any one of claims 70, 85-86, 97 or 99-104 wherein the blended juice has a color determined substantially by said cranberry juice component.

108. (Previously Presented) The food product of any one of claims 70, 85-86, 97 or 99-104 wherein the blended juice food product has an anthocyanin content of about 1.6 mg/100 ml or less and a color determined substantially by the cranberry juice component.

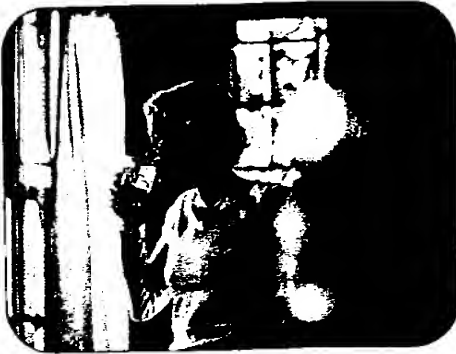
109. (Previously Presented) The food product of claim 108 wherein the anthocyanin content of the blended juice is about 0.5 mg/100 ml or less.



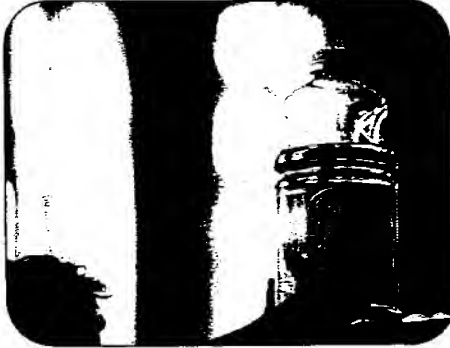
White Cranberry

"Great For Drinking" :30

OSRD-1913



(SFX: PHONE RINGS)



MOM VO: Hello.



ANNCR VO: Ocean Spray introduces
the less tart taste



of White Cranberry.



CHILD: Uh-oh.
ANNCR VO: Great for drinking...



MOM VO: Kevin?
ANNCR VO: Even better for spilling.



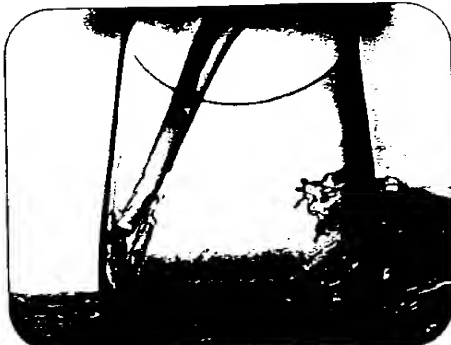
You've never tasted anything



quite like



White.



(SFX: POURING)



(SFX: WAVE)



Crave the wave.

ANNCR VO: Ocean Spray.
Crave the Wave.

STAGNITO's
NEW PRODUCTS
AND BEVERAGE FROM CONCEPT TO CONSUMER
MAGAZINE

An annual look
at industry
new product
innovation

*Special Supplement:
Innovators 2002
Conference Coverage*

Sponsored by

Best
New
Products
of 2002

WWW.NEWPRODUCTSMAG.COM



NEW PRODUCTS OF 2002

If Merwyn Technology is to be believed, things are looking up in the new product development arena. Sure, it could be because there were tons more submissions for Best New Products of 2002 for Merwyn to feed on, but as a magazine dedicated to upping the quality and success of new product development, *Stagmito's New Products Magazine* is going to take Merwyn's comments as a positive sign for the industry.

In our second look at the best our industry has to offer, SNPM again combined the prowess of Merwyn simulated test marketing technology from Eureka! Ranch, Cincinnati, with the senses and emotions of SNPM's editorial staff, including Joan Holleran, Lori Dahm and Nick Roskelly.

Merwyn evaluated package copy, one-page concepts describing the product and additional materials that would

be obvious to any consumer in the grocery store aisle. Submissions included background information pertaining to market share, projected marketplace uniqueness and pricing information. In addition, Merwyn was fed digital images of the products that were included in the evaluation process.

After Merwyn had its say, an expert team of trained Eureka! Ranch analysts answered an in-depth series of questions pertaining to the presence or absence of success archetypes in each individual product's offering. The analysts' responses were then compared to Merwyn Technology's database of more than 10,000 new products and services, thus benchmarking them against current marketplace offerings.

The humans actually prepared and consumed the product, providing their response to price/quality, packaging appearance, convenience, taste and innovation. We've provided overall scores from both Merwyn and the humans because, not surprisingly, we weren't all on the same page.



Birds Eye Hearty Spoonfuls frozen, heat and serve soups

Company: Agrilink Foods,
Green Bay, Wis.

Suggested Retail Price: \$2.39

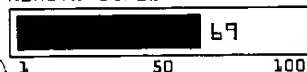
Varieties: Homestyle Chicken Noodle, Cheesy Cream of Broccoli, Chicken, Rice and Vegetables and Italian Minestrone

Ingredients: Cheesy Cream of Broccoli variety: broth: water, pasteurized process cheese spread (American cheese (milk, cheese culture, salt, enzymes), water, whey, sodium phosphate, whey protein concentrate, skim milk, milkfat, salt, artificial color), chicken flavor (chicken meat including natural chicken juices, salt, hydrolyzed soy and corn protein, sugar, natural flavorings, potato flour, autolyzed yeast extract, carrot powder), cream, dehydrated cheddar cheese (cheddar cheese (cultured pasteurized milk, salt, enzymes), whey, dry buttermilk, salt, disodium phosphate, citric acid, artificial color (yellow 5 and yellow 6), wheat flour, nonfat dry milk, whey solids, cheddar cheese paste (granular, cheddar, semi-soft and blue cheese (pasteurized milk,

cheese cultures, salt, enzymes), water, whey, salt, butter, milk protein concentrate, lactic acid, sodium phosphate, citric acid, enzymes, natural flavor), butter, food starch-modified, cream powder (cream, partially hydrogenated soybean oil, whey, nonfat milk, soy lecithin), yeast extract, disodium phosphate, xanthan gum, mono-glycerides, spice, onion powder, vegetables: broccoli, potatoes, carrots, onions, celery

Merwyn: Birds Eye has the complete package: great taste communication and visualization, the Birds Eye name to back it up, and a unique enough offering that will interest consumers. Overall, a fantastic concept.

MERWYN SCALE



OUR RATING: 63.3

Nick: Substantial chunks of chicken, nice visual appeal in the bowl and tasted pretty good. Frozen vegetables and the rice really held up after cooking.

Lori: The most appealing aspect of these products was that they were convenient and did not require preparation by the consumer. They tasted okay to me and probably most consumers will think they taste good.

Joan: Where I had a reservations about

cooking a frozen soup, Nick pointed out during a recent tasting that a more convenient way would be to bring it to work frozen and by the time I needed to heat it at lunch, the process would be even faster. My other reservation is that I'm not sure consumers look in the freezer aisle for soup. Birds Eye, though, has a strong market in frozen and it's marketing the products alongside bowl meals. I think the message Birds Eye is putting out will pull consumers into the frozen aisle to try the product.

Nick: And once there, the messages the packages convey are concise and effective in luring the consumer to purchase.



Elements of Spice grinders

Company: Profiles Products,
Maple Valley, Wash.

Price: \$6.99

Varieties: Splash, Heat Wave,

Solar Power

Ingredients: Solar Power: Sundried tomatoes, black pepper, roasted garlic, olives, bell peppers, red onion, basil, wheatgrass

Merwyn: A truly unique offering blending various flavors and spices and built in grinder all in one. Enough uniqueness to spark a trial, with a relevant, yet dramatic difference from current market offerings. The strong benefit offering, coupled with a kitchen logic feel as to how the concept works, tilts the odds in their favor.

MERWYN SCALE



OUR RATING: 95.3

Joan: The seasoning mix in a grinder is a great idea. Although they're marketed as an after cooking seasoning, I would be more inclined to add it during the cooking process. I thought the Splash variety with sea salt was too salty vs. other seasonings in the grinder and it was hard to control the serving. The little saucer/lid helped because I could grind into it and serve from the little dish. I was very taken with the package and felt I was cook-

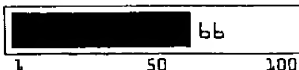
ing with fresher ingredients because I could grind them into the dish.
Nick: I really like the packaging, but then I'm a conscious sucker for packaging. I used Solar Power. I put it on rice and onions and it was a great complement to the dish. I could foresee it being used in several ways, such as in a marinade, as an enhancer to starches or even on vegetables.
Lori: I thought these products were great. They have a very upscale, gourmet appearance, with a nice label, grinder and interesting ingredients. I used them during and after cooking. Even though they are dramatically different, once I saw them, I knew exactly what to do with them. In each instance I enjoyed the flavor they imparted. Overall, I was a big fan of these.



Ocean Spray White Cranberry Juice Drinks

Company: Ocean Spray Cranberries Inc., Lakeville-Middleboro, Mass.
Price: \$3.16 for a 64-ounce bottle
Varieties: White Cranberry Juice Drink, White Cranberry and Peach Drink, White Cranberry and Strawberry Juice Drink
Ingredients: White Cranberry variety. Filtered water, white cranberry juice, white grape juice from concentrate, sugar, high fructose corn syrup, natural flavors, ascorbic acid (vitamin C), citric acid.
Merwyn: Strength lies in focusing on the less tart taste dimension. Trusted brand name drives credibility but the company also screams about this product's uniqueness in company written communication.

MERWYN SCALE



OUR RATING: 88.3

Joan: I like the white cranberry juice. I like the no-stain part of the cranberry juice.
Nick: Less tart, but being a former cranberry harvester, I've tasted tart cranberries. This is less tart, and satisfies its claim. It's like grape juice. As an adult, I would use it in a Cape Cod (cranberry juice and vodka

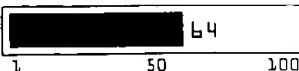
cocktail to the uninitiated). It will look nice on the shelf next to red cranberry juice.
Lori: As Nick noted, the less tart taste is a big deal, but I still found it too tart. I gave it to a regular cranberry juice drinker to try and he loved every variety. Ocean Spray has met its goals in developing a cranberry drink that appeals to consumers looking for a less tart taste.
Joan: I credit the company with coming up with new cranberry products that bring more consumers to the little berry. As with other Ocean Spray endeavors, the company does a good job of communicating to me why I'll want this product in my house. All the varieties went over well at my house, but I liked the white cranberry the best. The peach, which I think is a hard flavor to sell, was also good.



Red Baron Stuffed Pizza Slices

Company: Red Baron, Bloomington, Minn.
Price: \$2.99
Varieties: Pepperoni Pizza, Italian Sausage and Pepperoni Pizza, Italian Sausage with Roasted Red Onions Pizza, Supreme Pizza, Roasted Garlic Chicken Pizza and Five Cheese & Tomato Pizza
Ingredients: Five Cheese and Tomato: Enriched flour (wheat flour, malted barley flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), low moisture mozzarella cheese (cultured pasteurized milk, salt, enzymes), skim milk, tomatoes (tomatoes, water, tomato paste), margarine (partially hydrogenated soybean and cottonseed oils, water, salt, vegetable mono and diglycerides, beta carotene, vitamin A palmitate added), water, modified food starch, smoke flavored provolone cheese (cultured pasteurized milk, salt, enzymes and natural smoke flavor), asiago cheese (pasteurized cultured milk, salt, enzymes), sugar, yeast, contains 1 percent or less of parmesan cheese (pasteurized cultured part skim milk, salt, enzymes), romano cheese (pasteurized cultured cow's milk, salt, enzymes), dough conditioner (diacetyl tartaric acid ester of mono and diglycerides, wheat gluten, sugar dextrose, wheat flour, guar gum, active malt flour, calcium pyrophosphate, soy lecithin, ascorbic acid, enzyme), dried whole egg, shortening (partially hydrogenated soybean and cottonseed oils), salt, dextrose, butter powder (butter (cream, salt, annatto extract), nonfat dry milk, maltodextrin, buttermilk, partially hydrogenated soybean oil, salt, sour cream (cultured cream, nonfat dry milk), disodium phosphate, natural and artificial flavors, lactic acid, citric acid, color), dehydrated sweet cream (sweet cream, nonfat milk, and lecithin), corn starch, butter powder (butter, nonfat milk solids, sodium caseinate, BHT added to improve stability), sodium and pyrophosphate, sodium bicarbonate, dehydrated parsley, dough conditioner (wheat starch, L-Cysteine hydrochloride, ammonium sulfate), spices.

MERWYN SCALE



OUR RATING: 58

Joan: I loved the presentation, but I didn't really love them. I cooked them both ways, and the inside was still cold via microwave and conventional. I never thought the crust was that crispy. But the people who I served them to, including adults and children, really liked them. One tester said, "If you like Hot Pockets, you'll love these."
Nick: I thought they were a good size for either a larger snack or a lighter meal. In terms of taste, they were middle of the road. The sauce used was a tad commercially sweet.
Lori: I think the idea is great. I don't think the taste was either exceptional or terrible. Teenagers I tested the product on were excited about the idea of a stuffed pizza. The teenagers said they'd eat it again. One teenager I tested it on couldn't believe our reaction wasn't 100 percent positive. He absolutely loved them.
Nick: When you make a pizza easy to make, it's a likely sell. It's easy to prepare and teenagers can prepare it while they pause their Tekken 3 game.
Joan: What's Tekken 3?
Nick: Never mind.

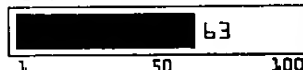


Friazós

Company: Wells Dairy Inc., Le Mars, Iowa
Price: \$1.40 - \$1.50 (suggested retail for food-service \$4.49)
Varieties: Cookie Craze, Caramel Pecan Passion, Key Lime Melt Down, Peanut Butter Panic, Double Fudge Frenzy
Ingredients: Ice cream; milk, cream, sugar, Brownie Pieces (sugar, unbleached and bleached enriched wheat flour (flour, niacin, reduced iron, thiamin mononitrate, riboflavin, folic acid), water, vegetable shortening (partially hydrogenated soybean oil, propylene glycol monoesters, mono & diglycerides, soy lecithin), eggs, natural cocoa powder, corn syrup solids, invert sugar, salt, baking powder (bicarbonate, corn starch, calcium sulfate, monocalcium phosphate), vanilla extract), chocolate syrup base (corn syrup, water, cocoa processed with alkali, chocolate liquor, caramel color, natural and artificial flavors, potassium sorbate as preservative, citric acid, sodium benzoate as preservative), buttermilk, corn syrup, cocoa processed with alkali, carob bean gum, guar gum, mono & diglycerides, carrageenan. Chocolate sauce: high fructose corn syrup, water, dextrose, corn syrup, nonfat dry milk, cocoa processed with alkali, margarine (liquid soybean oil, partially hydrogenated soybean oil, water, salt, whey, vegetable mono & diglycerides, soy lecithin, sodium benzoate as preservative, artificial flavor, beta carotene for color, vitamin A palmitate), modified corn starch, salt, soy lecithin, potassium sorbate as preservative. Chocolate mousse: water, partially hydrogenated vegetable shortening (palm kernel oil and/or soybean oil), corn sugar, sugar, dextrose, cocoa processed with alkali, natural and artificial flavor, propylene glycol, sodium caseinate (milk derived), soy protein, potassium sorbate as preservative, polysorbate 60, modified cellulose,

soy lecithin, mono & diglycerides, salt, polyglycerol esters of fatty acids, xanthan gum, bitersweet brownies: sugar, unenriched wheat flour, margarine (liquid soybean oil, partially hydrogenated soybean oil, water, salt, whey, soy lecithin, vegetable mono & diglycerides, sodium benzoate as preservative, beta carotene for color, artificial flavor, vitamin A palmitate), cocoa, pasteurized whole eggs, brown sugar, fructose, water, baking powder (sodium acid pyrophosphate, sodium bicarbonate, corn starch, monocalcium phosphate), cocoa processed with alkali, natural flavor (contains vanilla components), salt. Allergen information: Contains milk, wheat, eggs, and soy.

MERWYN SCALE



OUR RATING: 100

Lori: Every one of my friends who tried these products loved them. They ate all the way to the bottom and loved every bite. I even made new friends with these products. Once we figured out how to present these — i.e. the other end up as a restaurant item — they tasted even better.
Joan: The presentation was great. They tasted as good as they looked. Very rich. I think they'd be great for home entertaining, too.
Nick: I did turn them upside down, but it took me two times to have the presentation right. It does look really nice on a small plate. But I did eat one just out of the cup and it's kind of a surprise when you eat the top layer, which would be ice cream, and then you get to the treasures at the bottom.



El Monterey Tornadoes

Company: Ruiz Foods, Dinuba, Calif.
Price: \$0.99
Varieties: Sausage, Egg and Cheese, Chicken, Shredded Beef, Apple-Cinnamon
Ingredients: Tortilla (bleached wheat flour (enriched with niacin, reduced iron, thiamin mononitrate, riboflavin, folic acid), water, soybean oil, salt, baking powder (bicarbonate of soda, starch, sodium aluminum sulfate and monocalcium phosphate), whey, sodium metabisulfite (dough conditioner), filling (water, processed Monterey jack cheese and American cheese with peppers (jack and American cheese (milk, cheese peppers), mild (cream), sodium citrate, salt, sodium phosphate, lactic acid, sorbic acid used as a preservative), chicken (white meat chicken, water, sodium phosphate, salt, natural smoke flavor), spinach, red bell pepper, corn, black beans, modified corn starch, jalapeño peppers (jalapeño chiles, salt, acetic acid, calcium chloride), cilantro, salt, spices, garlic, seasoning blend (salt, paprika, onion, chili pepper, corn starch, spices, garlic, annatto, silicon dioxide (anti-caking agent)), chili pepper), batter mix

continued on page 24

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Martin F. Berry et al. Art Unit : 1761
Serial No. : 09/447,023 Examiner : Helen Pratt
Filed : November 22, 1999
Title : CRANBERRY PROCESSES AND PRODUCTS

Commissioner for Patents
Washington, D.C. 20231

DECLARATION UNDER 37 CFR §1.132

1. I am a named inventor of the above-captioned patent application and an employee of the assignee of this application.

2. I have worked in the food products industry in a technical capacity for over 23 years. I earned a Bachelor's Degree in Chemical Engineering from the University of Rhode Island in 1970.

3. I have reviewed the pending claims in the above-referenced patent application and the Examiner's action dated April 29, 2002, along with the cited reference, Chiriboga et al., Journal of Food Science, 1973, pages 464-467 ("Chiriboga").

4. The pending independent claims are claims 70 and 97.

5. Claim 70 recites a cranberry food product that is a blended juice. The food product includes a cranberry juice component that has a juice anthocyanin content of about 10 mg/100ml or less and a component selected from another juice component, water, sweetener or acid. The juice component having the anthocyanin content of about 10 mg/100 ml or less is the sole component from cranberries in the blend.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit

Signature

Typed or Printed Name of Person Signing Certificate

6. Claim 97 recites a cranberry food product as a blended juice. The food product includes a cranberry juice component that has a juice anthocyanin content of about 10 mg/100ml or less, another juice component, and a sweetener. The juice component having the anthocyanin content of about 10 mg/100 ml or less is the sole component from cranberries in the blend.

7. An element of the claims discussed above is a cranberry juice component that has a juice anthocyanin content of about 10 mg/100ml or less as the sole component from canberries in the blend.

8. Other dependent claims, for example, claims 85, 86, 105, 106, recite that the cranberry juice component has even lower anthocyanin content (about 8 or 3.5 mg/100 ml or less). Claim 107, which is dependent on claim 70 and others, recites that the blended juice has a color determined substantially by the cranberry juice component.

9. As discussed in the specification of our patent application, the prior ordinary and commercially desirable color of cranberries, i.e. the deep red hue characteristic of cranberries, is substantially due to the presence of anthocyanin in the berries. The anthocyanin content of the juice component recited in our claims is low. Measurement of anthocyanin content of the juice component is discussed in our application (e.g. page 4, lines 7-17 and page 6, lines 1-10). One technique for obtaining this juice component is to cultivate berries so that many do not obtain a deep red color, and then color-select the very low color berries, which are typically white or pink, to substantially isolate berries with low anthocyanin content (see specification page 2, lines 17-18 and page 5, lines 10-page 6, line 10).

10. Prior to the inventions described in our patent application, it was convention in the industry to segregate lots of cranberries by color. Very low color berries, those being generally white in appearance, were typically relatively small in number and were considered undesirable.

11. The Ocean Spray protocol for color grading lots of berries that was in use prior to our inventions had six color grades. The lowest color grade was grade 1, which was for lots having a berry anthocyanin content of about 24 mg/100 g or less. The other color grades corresponded to higher anthocyanin content. For example, grade 2 corresponded to 25 to 29 mg/100 g and grade 6 corresponded to 60 to 69 mg/100 g or more. (The berry anthocyanin content is usually about twice the juice anthocyanin content. Note that even for color grade 1, the low juice anthocyanin level of the juice component in our claims would not necessarily be

provided.) The commercial value of the fruit, and the compensation to Ocean Spray's growers, was based in part on the color grade, with the more highly colored berries having greater value and the grower generally receiving greater payment.

12. For Ocean Spray cranberry juice cocktail (CJC), lots of different color grade, or juice derived from lots having different color grade, were typically blended to assure that the finished product conformed to a specified red color standard. The target red color for Ocean Spray CJC typically corresponded to a berry anthocyanin content of about 30 to 50 mg/100 g or more. The anthocyanin content of the corresponding juice ingredient derived from the berries is typically about 15 to 25 mg/100 ml. However, the anthocyanin content of the finished CJC product in which the juice component is diluted with water and other ingredients is typically about 4-7 mg/100 ml.

13. In the office action, the claims in our patent application stand rejected as obvious over a single reference, Chiriboga.

14. The objective in the Chiriboga reference is to produce an experimental CJC that has the characteristic red color of cranberry.

15. The rejection points in particular to Table 1 and indicates that Chiriboga discloses a juice component that contains anthocyanin content within the claimed range. This analysis of Table 1 is incorrect. Table 1 provides the anthocyanin content of experimental batches of CJC, not the anthocyanin content of the juice component(s) as an ingredient(s).

16. The experimental CJC's in Table 1 were formulated by blending press juices from "dark" and relatively "pale" cranberries, and by adding crude anthocyanin powder (except for the first example in which no powder is added). While Chiriboga uses the terms "light" and "pale," the anthocyanin content of the "light" press juice is not reported. Nor can the anthocyanin content of the "light" press juice be reliably calculated from the data provided by Chiriboga. The Chiriboga article provides in Table 1 the "initial" anthocyanin content of the CJC resulting from the blending of "light" and "dark" press juices. The initial anthocyanin content is the content prior to adding anthocyanin extract. The Chiriboga article also provides the percentage of "light" press juice in the blends. The additional data needed to calculate the anthocyanin content of the "light" press juice is the anthocyanin content of the "dark" press juice.

I attempted to calculate the anthocyanin content of the "dark" press juice as follows. The first entry in Table 1 provides a CJC without any "light" press juice, meaning that only "dark" press juice was used. That example has an "initial" anthocyanin content of 13.8 mg/100 ml.

To try to determine the anthocyanin content of the "dark" press juice, I attempted to determine the amount of press juice in the experimental CJC's. According to Chiriboga, batches of 4.42 L of a first press juice, 1.70 L of second press juice (second press juice is obtained by soaking berries previously subjected to an initial pressing) and 10.88L of 15 brix sugar water solution were blended. The first experimental CJC in Table 1 included only "dark" press juice. Therefore, the percentage of "dark" press juice in the first experimental CJC was $(4.42 \text{ L} + 1.70 \text{ L}) / (4.42 \text{ L} + 1.70 \text{ L} + 10.88 \text{ L}) \times 100 = 36\%$ by volume. Since the only source of anthocyanin contributing to the "initial" anthocyanin content is the "dark" press juice, the "dark" press juice must have had an anthocyanin content of $(13.8 \text{ mg/100 ml}) / (0.36) = 38.33 \text{ mg/100 ml}$.

Using this anthocyanin level for the "dark" press juice, I then tried to calculate the anthocyanin content of the "light" press juice using the data in the second entry of Table 1, in which 5% "light" press juice was used. The calculation is as follows:

$$0.05 (X) + 0.95 (38.33 \text{ mg/100 ml}) = (9.8 \text{ mg/100 ml}) / (0.36)$$

Solving this computation for X yields an anthocyanin content for the "light" press juice which is a negative number. This cannot be correct since the "light" press juice could not have an anthocyanin content less than zero.

This discrepancy might be explained by the note in the Chiriboga article that the press juices were obtained from different lots of berries and therefore the initial pigment contents varied (see p. 465, middle column, first para). Thus, without the anthocyanin contents for each dark juice used, the anthocyanin content for the light juice cannot be reliably calculated. The calculation is also unreliable because the brix level of the press juices is not reported. As discussed in our patent application, juice anthocyanin content is normalized to 7.5 brix. The Chiriboga Ph.D. thesis, which is referenced in the Chiriboga article, appears to discuss the juice extraction at pages 46 and CJC formulation at pages 56-59. But this discussion does not appear to provide the data missing in the calculations above.

Therefore, while the Chiriboga article uses terms like "pale" and "light" to describe certain batches of press juice, the anthocyanin content of the "light" press juice cannot be reliably calculated.

17. In my view, the Chiriboga article does not describe or suggest a blended juice product having as the sole component from cranberries, a juice component with an anthocyanin content of about 10 mg/100ml or less as claimed. Indeed, the Chiriboga article only exemplifies the conventional approach in the art in blending fruit or juices to provide CJC having a deep characteristic red color.

18. Since our inventions, Ocean Spray has marketed blended juice products in which a cranberry juice component having a juice anthocyanin content of about 10 mg/100 ml or less is the sole cranberry component in the blend. An example is the "White Cranberry" juice product. A story board for a television commercial for this product is attached as Exhibit F. The photographs illustrate the low color of the cranberries.

19. In addition, Ocean spray has modified its incentive program so that certain growers are compensated more for providing low color cranberries. As mentioned above, this is contrary to convention and is indicative of the non-obviousness and value of our inventions.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 9/30/02

Harold L. Mantius
Harold L. Mantius